

CLAIM SET AS AMENDED

1. (Currently Amended) A liquid crystal display for a vehicle comprising:
a liquid crystal display panel;
a circuit board for mounting circuit elements including a liquid crystal driver;
a temperature sensor mounted directly on the circuit board for detecting an ambient temperature of the circuit board; and

a control circuit, mounted on the circuit board, for controlling liquid crystal drive voltage based on ~~an~~ the ambient temperature detected by the temperature sensor,

the liquid crystal display panel and the circuit board being placed one upon the other in a meter housing having a substantially closed space therein with a predetermined space therebetween, wherein the display further comprises a heat collection panel exposed to surround the screen of the liquid crystal display panel, said heat collection panel divides an inside space of the meter housing where said temperature sensor and said liquid crystal display are mounted, and causes the ambient temperature of said temperature sensor to follow a temperature change of said liquid crystal display panel.

2. (Original) The liquid crystal display for a vehicle according to claim 1, wherein the heat collection panel is mounted to the liquid crystal display panel through an adiabatic member.

3. (Original) The liquid crystal display for a vehicle according to claim 1, wherein the circuit board is inclined when the liquid crystal display for vehicle is properly mounted to a vehicle and the temperature sensor is installed at a high position above the inclined circuit board.

4. (Original) The liquid crystal display for a vehicle according to claim 1, wherein the temperature sensor is a thermistor.

5. (Original) The liquid crystal display for a vehicle according to claim 1, wherein the liquid crystal display is held in place by a liquid crystal holder, the liquid crystal holder being separated from the circuit board by the predetermined space, and held upright on the circuit board by leg portions extending downward from of the liquid crystal display holder to the circuit board.

6. (Original) The liquid crystal display for a vehicle according to claim 1, wherein the liquid crystal display panel and the circuit board are parallel to one another.

7. (Original) The liquid crystal display for vehicle according to claim 1, wherein the control circuit further comprises:

a function storage portion for storing a function representing the relationship between the temperature of the liquid crystal display panel and the optimum drive voltage;

a compensation temperature storage portion for storing a compensation temperature for compensating for a difference between the detection temperature of the temperature sensor and the temperature of the liquid crystal display panel; and

a drive voltage decision portion for determining LCD drive voltage based on the function and the temperature of the liquid crystal display panel,

the drive voltage decision portion represents the temperature of the liquid crystal display panel by the detection temperature until the detection temperature exceeds a predetermined reference temperature, and represents the temperature of the liquid crystal display panel by the total of the detection temperature and the compensation temperature when the detection temperature exceeds the reference temperature.

8. (Original) The liquid crystal display for a vehicle according to claim 3, wherein the temperature sensor is installed at a high position in the predetermined space between the meter housing and the circuit board.

9. (Original) The liquid crystal display for a vehicle according to claim 7, wherein the predetermined reference temperature is 45°C.

10. (Previously Presented) A liquid crystal display comprising:

a liquid crystal display panel;

a circuit board for mounting circuit elements including a liquid crystal driver;

a temperature sensor mounted on the circuit board; and

a control circuit mounted on the circuit board, the liquid crystal display panel and the circuit board being placed one upon the other in a meter housing having a substantially closed space therein with a predetermined space therebetween, wherein

the display further comprising a heat collection panel exposed to surround the screen of the liquid crystal display panel, and

the control circuit further comprises an adder circuit for adding a compensation temperature to ~~the~~ a temperature detected by the temperature sensor, and outputting a LCD drive voltage which is a function of a sum of these temperatures to the liquid crystal driver when the temperature detected by the temperature sensor exceeds a predetermined reference temperature.

11. (Original) The liquid crystal display according to claim 10, wherein the heat collection panel is mounted to the liquid crystal display panel through an adiabatic member.

12. (Original) The liquid crystal display according to claim 10, wherein the circuit board is inclined when the liquid crystal display for vehicle is properly mounted to a vehicle and the temperature sensor is installed at a high position above the inclined circuit board.

13. (Original) The liquid crystal display according to claim 10, wherein the temperature sensor is a thermistor.

14. (Original) The liquid crystal display according to claim 10, wherein the liquid crystal display panel and the circuit board are parallel to one another.

15. (Original) The liquid crystal display according to claim 10, wherein the liquid crystal display is held in place by a liquid crystal holder, the liquid crystal holder being separated from the circuit board by the predetermined space, and held upright on the circuit board by leg portions extending downward from of the liquid crystal display holder to the circuit board.

16. (Previously Presented) The liquid crystal display according to claim 10, wherein the control circuit further comprises:

a function storage portion for storing a function representing the relationship between the temperature of the liquid crystal display panel and the optimum drive voltage;

a compensation temperature storage portion for storing the compensation temperature, the compensation temperature compensating for a difference between the detection temperature of the temperature sensor and the temperature of the liquid crystal display panel; and

a drive voltage decision portion for determining the LCD drive voltage based on the function and the temperature of the liquid crystal display panel,

the drive voltage decision portion represents the temperature of the liquid crystal display panel by the detection temperature until the detection temperature exceeds the predetermined reference temperature, and represents the temperature of the liquid crystal display panel by the total of the detection temperature and the compensation temperature when the detection temperature exceeds the reference temperature.

17. (Original) The liquid crystal display according to claim 12, wherein the temperature sensor is installed in a high position in the predetermined space between the meter housing and the circuit board.

18. (Original) The liquid crystal display according to claim 16, wherein the predetermined reference temperature is 45°C.